R.F.DOUBLE TRIODE for use as oscillator, mixer or amplifier in television receivers

DOUBLE TRIODE H.F. pour utilisation en oscillatrice, mélangeuse ou amplificatrice dans des récepteurs de télévision

HF-DOPPELTRIODE zur Verwendung als Oszillator, Mischröhre oder Verstärker in Fernsehempfängern

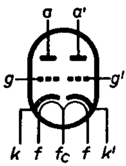
Heating : indirect by A.C. or D.C.; series or parallel supply

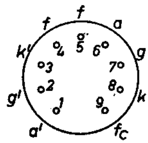
Cnauffage: indirect par C.A. ou C.C.; alimentation parallèle ou série

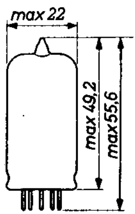
Heizung : indirekt durch Wechsel- oder Gleichstrom; Serien- oder Parallelspeisung

V_f = 6,3 V		V_f = 12,6 V	
I_f = 300 mA[1])		I_f = 150 mA[1])	
Pins Broches Stifte	9-(4+5)	Pins Broches Stifte	4-5

Dimensions in mm
Dimensions en mm
Abmessungen in mm







Base, culot, Sockel: Noval

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[1]) In case of series supply a current-limiting device must be inserted in the heater circuit for limiting the current when switching on.

En cas d'alimentation en série il faut utiliser un limiteur de courant pour limiter le courant près de la mise en circuit.

Bei Serienspeisung muss ein Strombegrenzer verwendet werden, damit der Heizstrom beim Einschalten begrenzt wird.

Capacitances
Capacités
Kapazitäten

C_g	= 2,3 pF	$C_{g'}$	= 2,3 pF
C_a	= 0,45 pF	$C_{a'}$	= 0,35 pF
C_{ag}	= 1,6 pF	$C_{a'g'}$	= 1,6 pF
C_{ak}	= 0,20 pF	$C_{a'k'}$	= 0,20 pF
C_{kf}	= 2,5 pF	$C_{k'f}$	= 2,5 pF
$C_{k/g+f}$	= 4,7 pF	$C_{k'/g'+f}$	= 4,7 pF
$C_{a/g+f}$	= 1,9 pF	$C_{a'/g'+f}$	= 1,8 pF
C_{gf}	< 0,17 pF	$C_{g'f}$	< 0,17 pF

$C_{aa'}$ < 0,4 pF
$C_{gg'}$ < 0,005 pF
$C_{ag'}$ < 0,07 pF
$C_{a'g}$ < 0,04 pF

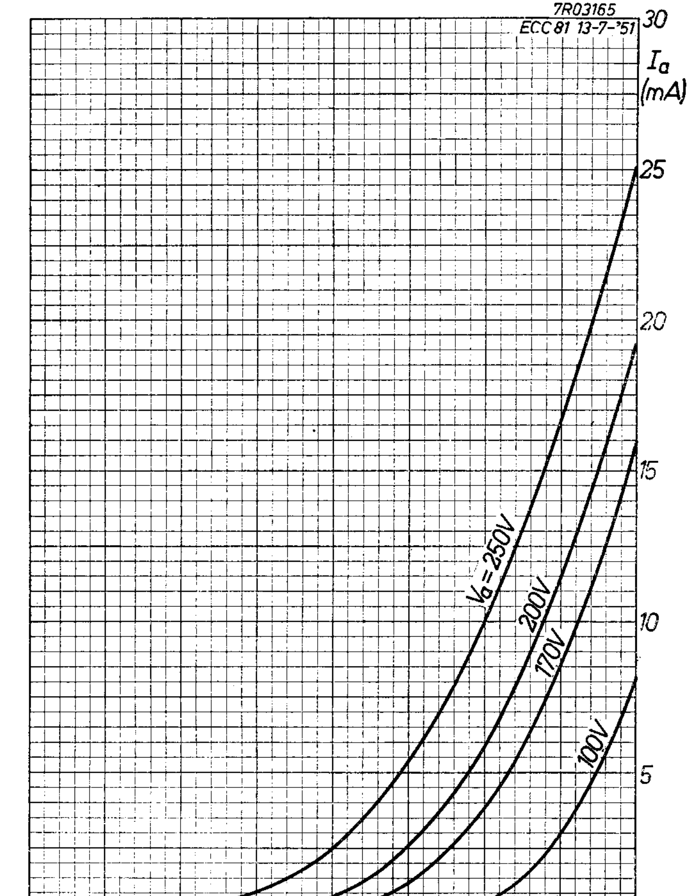
Typical characteristics
Caractéristiques types
Kenndaten

V_a	=	100	170	200	250	V
V_g	=	-1,0	-1,0	-1,0	-2,0	V
I_a	=	3,0	8,5	11,5	10	mA
S	=	3,75	5,9	6,7	5,5	mA/V
μ	=	62	66	70	60	
R_i	=	16,5	11	10,5	11	kΩ

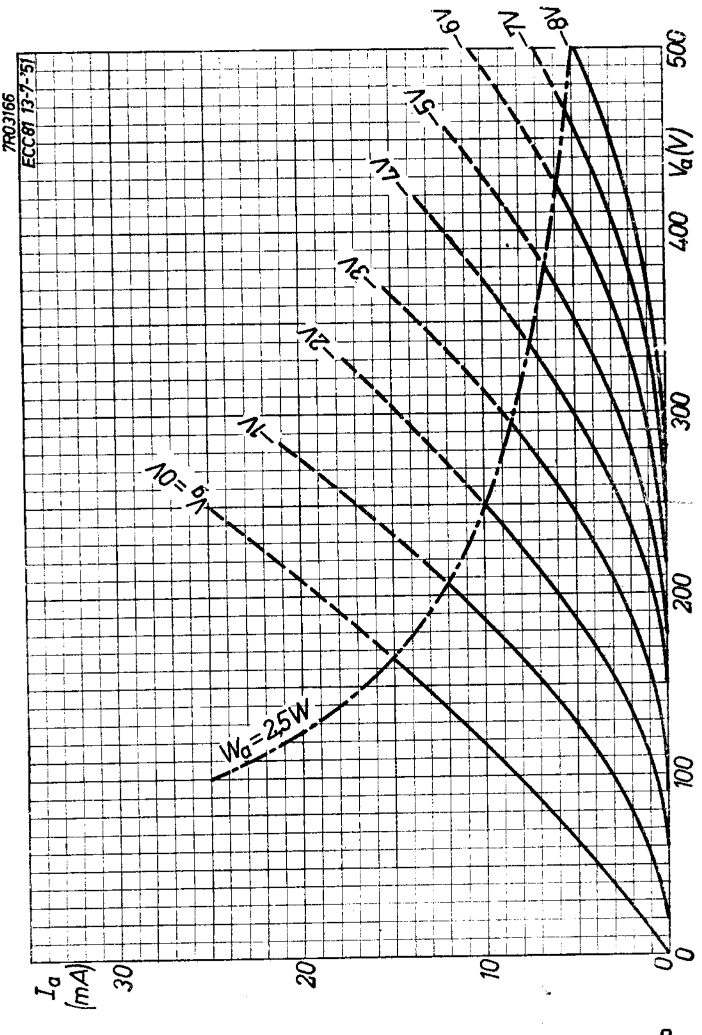
Limiting values (each section)
Caractéristiques limites (par système)
Grenzdaten (pro System)

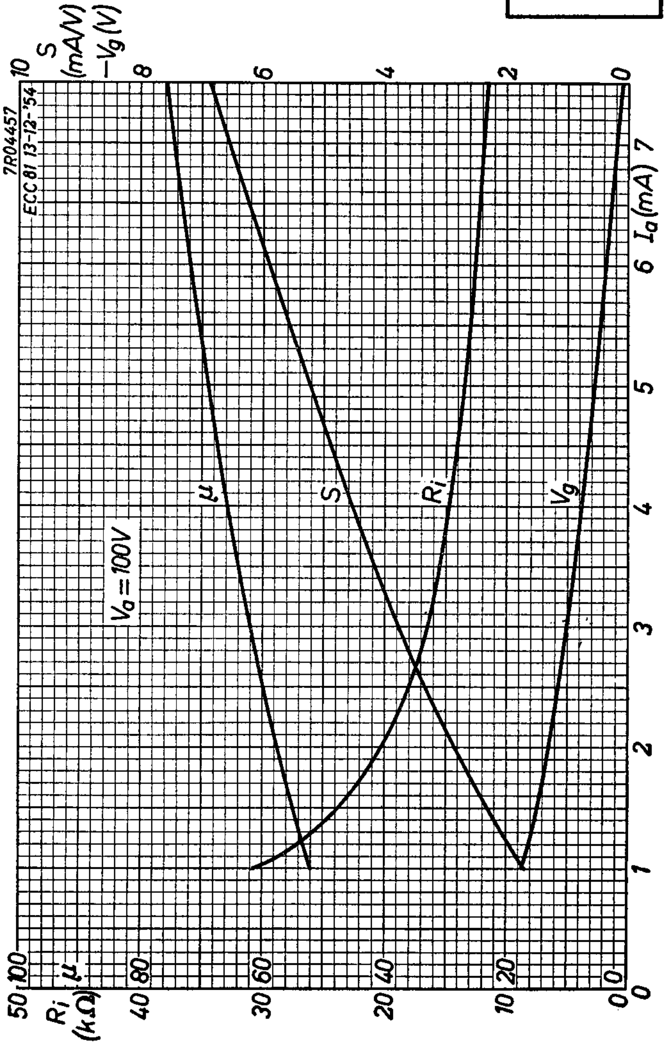
V_{a_o}	= max.	550	V
V_a	= max.	300	V
W_a	= max.	2,5	W
I_k	= max.	15	mA
$-V_g$	= max.	50	V
R_g	= max.	1	MΩ [1])
V_g (I_g = +0,3 μA)	= max.	-1,3	V
V_{kf}	= max.	90	V
R_{kf}	= max.	20	kΩ

[1]) With automatic grid bias
Avec polarisation de grille automatique
Mit automatischer Gittervorspannung

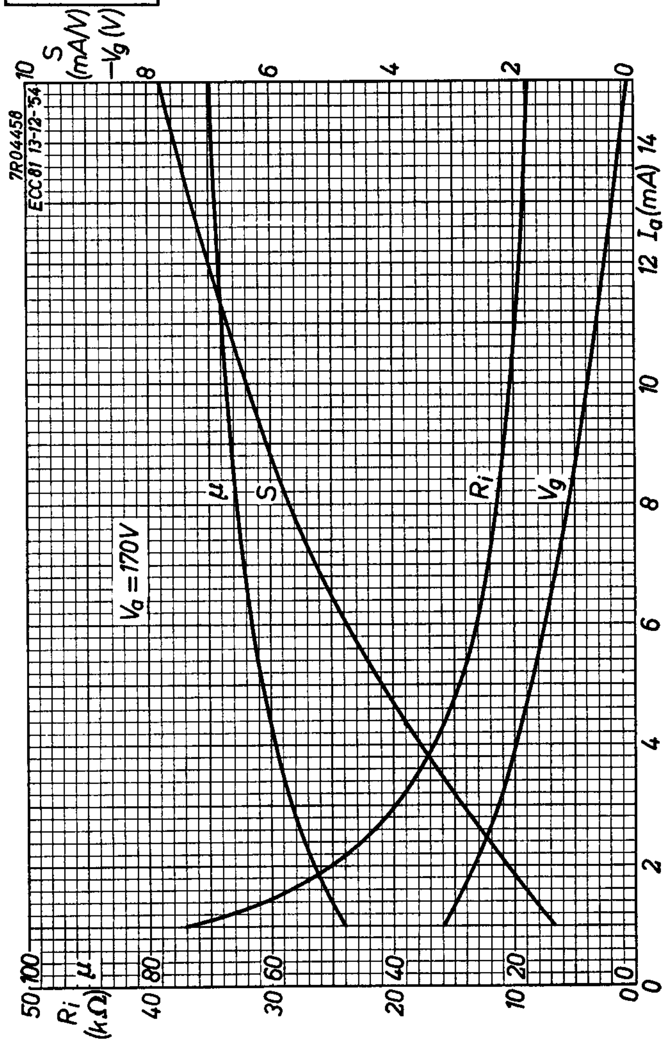

7R03165
ECC 81 13-7-'51
30
I_a
(mA)
25
20
15
10
5
0
V_a=250V
200V
170V
100V
−8
V_g (V)
−6
−4
−2
0

ECC 81 **PHILIPS**

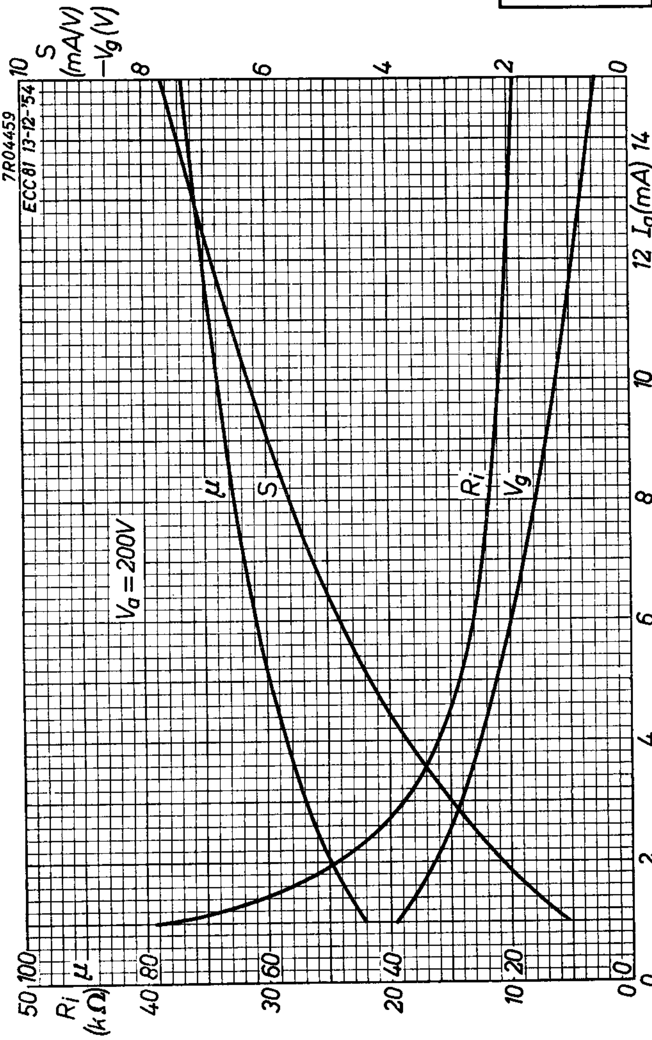



10 S (mA/V)
8 −Vg (V)
7R04457
ECC 81 13-12-'54
Va = 100V
μ
S
Ri
Vg
Ia (mA)
50 100 Ri (kΩ) μ
40 80
30 60
20 40
10 20
0 0
1 2 3 4 5 6 7

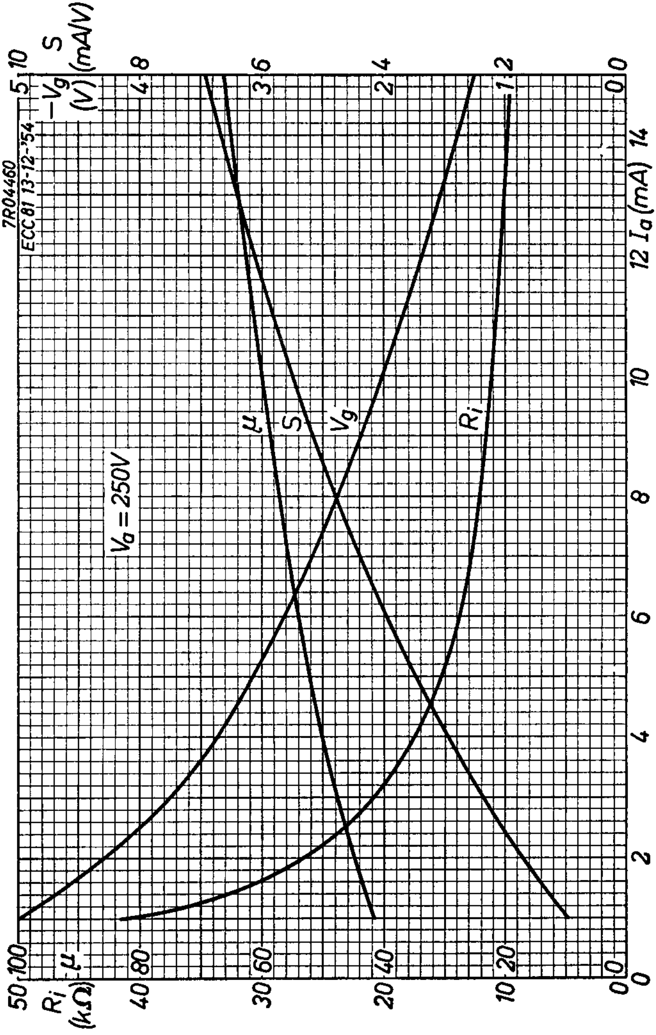
ECC 81 **PHILIPS**



D


7R04459
ECC81 13-12-'54
S (mA/V)
$-V_g$(V)
I_a(mA)
μ
R_i (kΩ)
$V_a = 200V$
μ
S
R_i
V_g
10 8 6 4 2 0
14 12 10 8 6 4 2 0
100 80 60 40 20 0
50 40 30 20 10 0

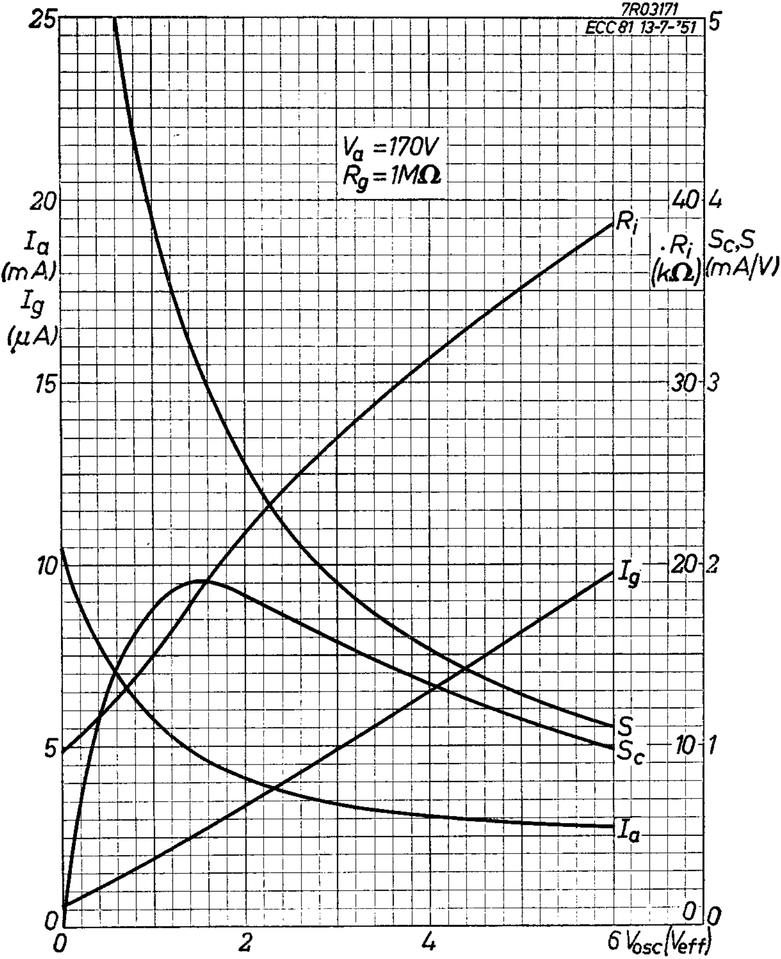
ECC 81 PHILIPS



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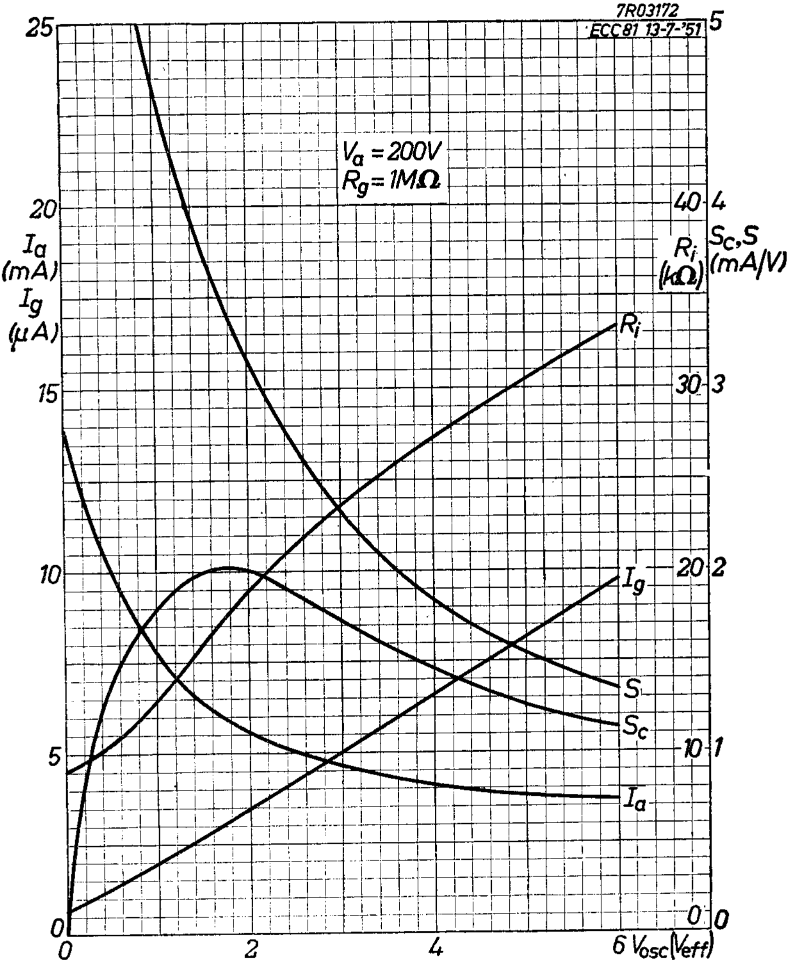
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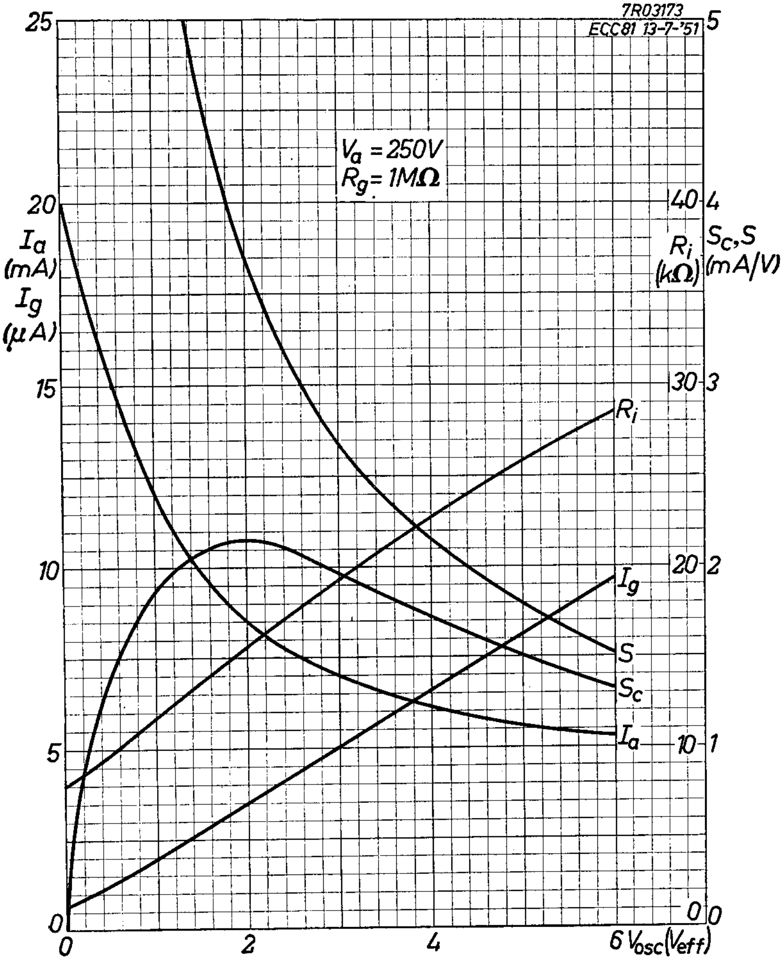
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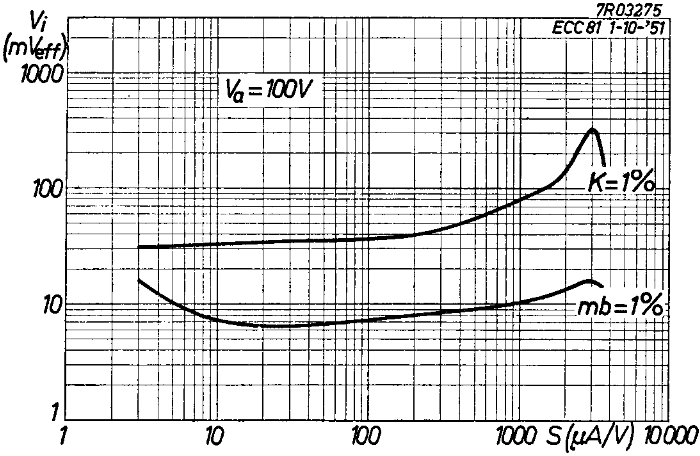
7R03172
ECC 81 13-7-'51
$V_a = 200V$
$R_g = 1M\Omega$
25
20
15
10
5
0
I_a (mA)
I_g (μA)
40
30
20
10
0
R_i (kΩ)
5
4
3
2
1
0
S_c, S (mA/V)
R_i
I_g
S
S_c
I_a
0
2
4
6 V_{osc} (V_{eff})

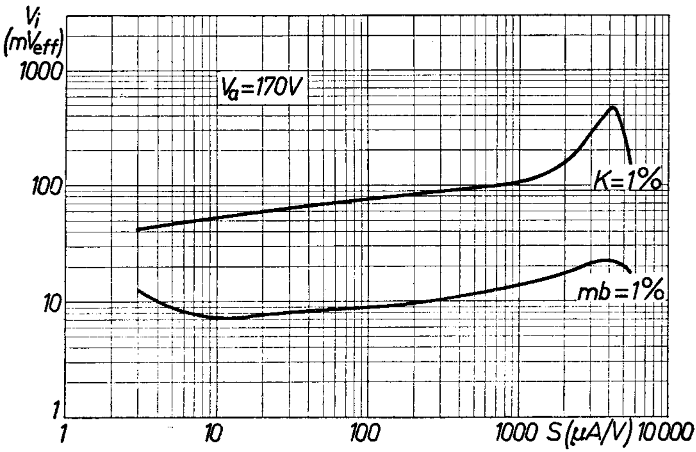
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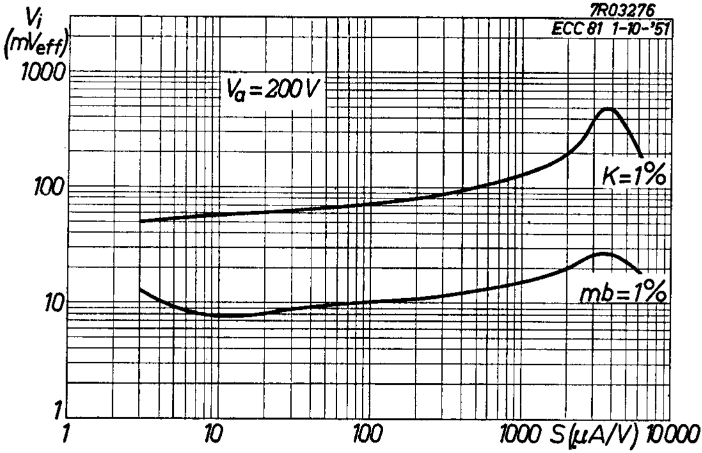
ECC 81

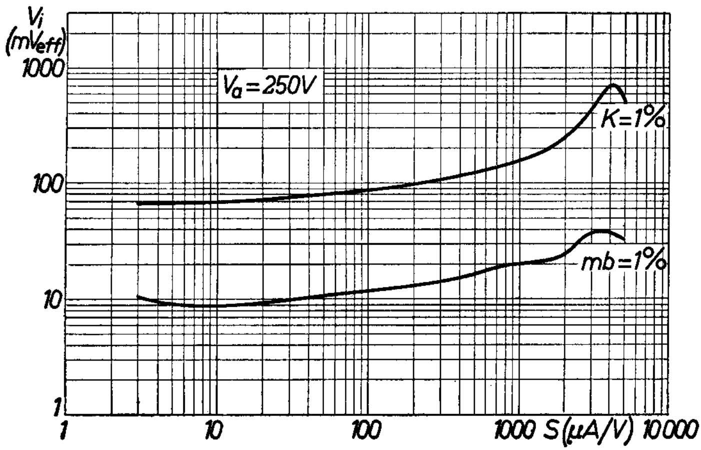


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7R03275
ECC 81 1-10-'51
V_i (mV_{eff})
1000
100
10
1
V_a=100V
K=1%
mb=1%
1
10
100
1000
S(μA/V)
10000


V_i (mV_{eff})
1000
100
10
1
V_a=170V
K=1%
mb=1%
1
10
100
1000
S(μA/V)
10000


7R03276
ECC 81 1-10-'51
V_i (mV_{eff})
1000
100
10
1
$V_a = 200V$
K=1%
mb=1%
1
10
100
1000 S(µA/V) 10000


V_i (mV_{eff})
1000
100
10
1
$V_a = 250V$
K=1%
mb=1%
1
10
100
1000 S(µA/V) 10000

PHILIPS

Electronic Tube HANDBOOK

ECC81

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13	K	1951.10.10
14	FP	1999.02.16